

CLAIM AMENDMENTS

1. (Currently Amended) An x-ray exposure method comprising directing ~~an x-ray x-~~ rays generated ~~from~~ by an x-ray source to illuminate, through a mask, a resist ~~stacked~~ on a substrate with a lower layer film ~~posed therebetween~~ interposed between the resist and the substrate, wherein

~~said the lower layer film containing an element contains C, and being composed in such a way that an, of elements contained within the lower layer, the element absorbing a largest amount of x-rays of elements contained in the lower layer film is the element C, and~~

~~when a film thickness of said the lower layer film is t (nm), a density of said the lower layer film is ρ (g/cm³), an absorption edge of an element absorbing a largest amount of x-rays of elements contained in said the substrate is As (angstrom), a K-shell absorption edge of the element C is As Ac (angstrom), and an absorption edge of an element absorbing a largest amount of x-rays of elements contained in said the resist is Ar (angstrom), then a relation: $0.5 \times Ar < 12.4 / ((t \times \rho / 46)^{1/1.75} + 12.4 / Ac) < Ar$ is satisfied, and~~

~~a relation: $12.4 / ((t \times \rho / 46)^{1/1.75} + 12.4 / As) \leq \lambda \leq Ar$ is satisfied by an average wavelength λ (angstrom) of x-rays absorbed in said the resist.~~

2. (Currently Amended) The x-ray exposure method according to claim 1, wherein the element absorbing a largest amount of x-rays of the elements contained in said the resist is ~~an element~~ Cl, and ~~a film~~ thickness of said the resist is no more than 100 nm.

3. (Currently Amended) The x-ray exposure method according to claim 2, wherein the ~~film~~ thickness of said the resist is no more than 40 nm.